



PTO/SB/21 (03-03)

Approved for use through 04/30/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number 10/691,055

Filing Date October 22, 2003

First Named Inventor Kryliouk et al.

Art Unit

Examiner Name

Attorney Docket Number 5853-414

ENCLOSURES (Check all that apply)

- | | | |
|--|---|--|
| <input type="checkbox"/> Fee Transmittal Form
<input type="checkbox"/> Fee Attached
<input type="checkbox"/> Amendment/Reply
<input type="checkbox"/> After Final
<input type="checkbox"/> Affidavits/declaration(s)
<input type="checkbox"/> Extension of Time Request
<input type="checkbox"/> Express Abandonment Request
<input checked="" type="checkbox"/> Information Disclosure Statement
<input type="checkbox"/> Certified Copy of Priority Document(s)
<input type="checkbox"/> Response to Missing Parts/Incomplete Application
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Drawing(s)
<input type="checkbox"/> Licensing-related Papers
<input type="checkbox"/> Petition
<input type="checkbox"/> Petition to Convert to a Provisional Application
<input type="checkbox"/> Power of Attorney, Revocation
Change of Correspondence Address
<input type="checkbox"/> Terminal Disclaimer
<input type="checkbox"/> Request for Refund
<input type="checkbox"/> CD, Number of CD(s) _____ | <input type="checkbox"/> After Allowance Communication to a Technology Center (TC)
<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Status Letter
<input checked="" type="checkbox"/> Other Enclosure(s) (please Identify below):
PTO/SB/08B; 14 References; and 1 Postcard |
|--|---|--|

Remarks

No fee is believed due. However, if any fee is due, the Commissioner is authorized to charge any such fee and any additional fees due or credit any overpayment to Deposit Account No. 50-0951.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENTFirm or Individual
AKERMAN SENTERFITT
Neil R. Jetter

Signature

Date March 9, 2004

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231 on this date: March 9, 2004

Typed or printed
Neil R. Jetter

Signature

Date March 9, 2004

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: KRYLIOUK et al.

Application No.: 10/691,055

Examiner:

Filed: October 22, 2003

Group Art Unit:

For: GROUP III-NITRIDE ON Si USING EPITAXIAL BP
BUFFER LAYER

CERTIFICATE UNDER 37 CFR 1.8(a)

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on March 9, 2004.

Neil R. Jetter

Commissioner for Patents
Post Office Box 1450
Alexandria, VA 22313-1450

Date: March 9, 2004

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to the Duty to Disclose under 37 C.F.R. §1.56, Applicants hereby disclose information that may be relevant to the Examiner's consideration of the above-identified application and the patentability of its claims.

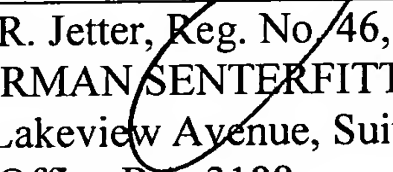
In accordance with Rules 56, 97, and 98 of the Rules of Practice in Patent Cases (37 C.F.R. §§ 1.56, 1.97, and 1.98), Form PTO/SB/08B and copies of references cited therein are submitted for consideration by the Examiner. While the references provided in this Information Disclosure Statement may be material to patentability pursuant to 37 C.F.R. § 1.56, it is not intended to constitute an admission that any reference referred to herein is prior art for this invention unless specially designated as such. Also, in accordance with 37 C.F.R. § 1.97(g), the

In re Application of: KRYLIOUK et al.
Application No.: 10/691,055
Filed: October 22, 2003
Group Art Unit:
For: GROUP III-NITRIDE ON Si USING EPITAXIAL BP
BUFFER LAYER

filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. § 1.56(a) exists.

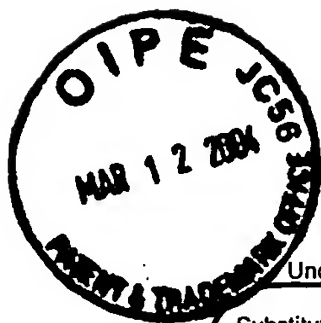
This Information Disclosure Statement is being filed before the issuance of a first office action on the merits of the application (37 C.F.R. 1.97(b)(3)); therefore, no fee is believed to be due. However, if any fee is due, the Commissioner is authorized to charge any such fee and any additional fees due or credit any overpayment to Deposit Account No. 50-0951.

Respectfully submitted,



Neil R. Jetter, Reg. No. 46,803
AKERMAN SENTERFITT
222 Lakeview Avenue, Suite 400
Post Office Box 3188
West Palm Beach, FL 33402-3188
Telephone: (561) 653-5000
Facsimile: (561) 659-6313

Docket No. 5853-414



PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known	
		Application Number	10/691,055
		Filing Date	October 22, 2003
		First Named Inventor	Kryliouk et al.
		Art Unit	
Examiner Name			
Sheet 1	of 2	Attorney Docket Number	5853-414

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		NIKISHIN et al., "High quality GaN grown on Si(111) by gas source molecular beam epitaxy with ammonia," Applied Physics Letters, 75:2073-2075, 1999	
		ZHANG et al., "Enhanced optical emission from GaN films grown on a silicon substrate," Applied Physics Letters, 74:1984-1986, 1999	
		LINTHICUM et al., "PROCESS ROUTES FOR LOW DEFECT-DENSITY GAN ON VARIOUS SUBSTRATES EMPLOYING PENDEO-EPITAXIAL GROWTH TECHNIQUES," MRS Internet J. Nitride Semicond. Res. 4S1, G4.9, 1999	
		STRITTMATTER et al., "Low-pressure metal organic chemical vapor deposition of GaN on silicon(111) substrates using an AlAs nucleation layer," Applied Physics Letters, 74:1242-1244, 1999	
		SANCHEZ-GARCIA et al., "Ultraviolet electroluminescence in GaN/AlGaIn single-heterojunction light-emitting diodes grown on Si(111)," Journal of Applied Physics, 87:1569-1571, 2000	
		NISHIMURA et al., "Growth of GaN on Si substrates-roles of BP thin layer," Optical Materials, 19:223-228, 2002.	
		NISHIMURA et al., "Low temperature growth interface for growing Boron Monophosphide on Si substrates," Applied Surface Science, 159-160:288-291, 2000.	
		NISHIMURA et al., "Growth of c-GaN on Si(100)," Materials Science and Engineering," B82:25-26, 2001.	
		IZUMIYA et al., "Growth of BP and GaN/BP heterostructures," Proceedings of the 19th International Symposium on Gallium Arsenide and Related Compounds, 157-162, 1993.	
		NISHINAGA et al., "Effect of Growth Parameters on the Epitaxial Growth of BP on Si Substrate," Japanese Journal of Applied Physics, 14:753-760, 1975.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Complete if Known	
		Application Number	10/691,055
		Filing Date	October 22, 2003
		First Named Inventor	Kryliouk et al.
		Art Unit	
		Examiner Name	
Sheet 2	of 2	Attorney Docket Number	5853-414

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		LANDOLT-BORNSTEIN, "Semiconductors," 3:14-28 and 43-50.	
		WELKER et al., "Solid State Physics," Group III-Group V Compounds, 1-78, 1956.	
		Johnson, S., "CHAPTER 3 GROWTH OF BP BY CVD" Ph.D. Thesis, 2001.	
		TERASHIMA et al., "Proceedings of the 8th International Symposium on Silicon Materials Science and Technology," 2:44-45, 1998.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.